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enc

and a polarization beam splitter, depending upon grating structures thereof. Then, as to these functions, various reports have been made in which there is a small optical performance variation caused by changes in incident angles of light beams entered into this SWS grating, and the SWS grating may have optically superior features.--

Please substitute the following paragraph for the paragraph starting at page 12, line 3 and ending at line 5. A marked-up copy of this paragraph, showing the changes made thereto is attached.

A2

--Fig. 1 is a perspective view for representing a diffractive optical element according to an embodiment 1 of the present invention;--

Please substitute the following paragraph for the paragraph starting at page 13, line 20 and ending at line 23. A marked-up copy of this paragraph, showing the changes made thereto is attached.

A3

--Fig. 1 is a perspective view for indicating a diffractive optical element which performs a polarization separation operation, according to an embodiment 1 of the present invention.--

Please substitute the following paragraph for the paragraph starting at page 13, line 24 and ending at page 14, line 1. A marked-up copy of this paragraph, showing the changes made thereto is attached.

A4

--In the diffractive optical element 1 for performing the polarization separation operation, a diffraction grating 3 capable of performing the polarization separation operation is provided on a substrate 2.--

Please substitute the following paragraph for the paragraph starting at page 14, line 2 and ending at line 11. A marked-up copy of this paragraph, showing the changes made thereto is attached.

AS

--The diffraction grating 3 is constituted by a one-dimensional blazed type grating shape, and has a grating period "P1" along a direction of 2 - 2 shown in this drawing. In the diffractive optical element 1, diffraction directions of light beams incident on diffractive optical element 1 are made different from each other, depending upon polarization directions thereof. Further, this diffraction grating 3 is set in such a manner that each of polarized lights is diffracted only at a specific diffraction order.--

Please substitute the following paragraph for the paragraph starting at page 15, line 19 and ending at line 27. A marked-up copy of this paragraph, showing the changes made thereto is attached.

AG

--One the other hand, the second diffraction grating portion 5 has an SWS grating structure in which the material  $n_1(\lambda)$  and the material  $n_2(\lambda)$  are alternatively repeated with a minute period smaller than the wavelength of the light used. The grating pitch of the SWS grating is "P1", and an occupation ratio of the material  $n_2(\lambda)$  which is occupied within the grating pitch "P1" is equal to  $F = f_1 / P_1$  (will be referred to as a "filling factor" hereinafter).--